

AMENDMENTS TO THE CLAIMS

For the convenience of the Examiner, all claims have been presented whether or not an amendment has been made. The claims have been amended as follows:

1. **(Currently Amended)** A method for interfacing with a surface within a computer-aided drawing environment, comprising:

determining that a plurality of curves operable to define ~~the surface~~ a surface plane constitute a $P \times 1$ surface condition, a $P \times 1$ surface condition being defined by a number of first curves equal to P and only one second curve, wherein P is an integer greater than zero;

~~if and only if it is determined that the~~ in response to determining that a plurality of curves constitute a $P \times 1$ surface condition, converting the $P \times 1$ surface condition into an $N \times M$ surface condition, an $N \times M$ surface condition being defined by a number of third curves equal to N and a number of fourth curves equal to M , wherein N and M are integers greater than one, the third and fourth curves mathematically filling the space of the surface plane defined by the first curves and the only one second curve;

constructing an $N \times M$ surface under the $N \times M$ surface condition; and
modifying the $N \times M$ surface to edit a drawing.

2. **(Original)** The method of Claim 1, wherein converting the $P \times 1$ surface condition into an $N \times M$ surface condition comprises generating at least one auxiliary curve that is substantially continuous with any adjoining surfaces of a surface having the $P \times 1$ surface condition and compatible with the number of first curves and the only one second curve that define the $P \times 1$ surface condition.

3. **(Original)** The method of Claim 1, wherein converting the $P \times 1$ surface condition into an $N \times M$ surface condition comprises generating an $N \times M$ surface condition to replace the $P \times 1$ surface condition.

4. **(Original)** The method of Claim 1, wherein converting the $P \times 1$ surface condition into an $N \times M$ surface condition comprises generating an $N \times M$ surface condition defined by the third and fourth curves such that the third and fourth curves are defined by mathematical equations all having an order no greater than mathematical equations defining the first and second curves.

5. **(Original)** The method of Claim 1, and further comprising processing the first curves and the second curve so that each one of the first curves and the second curve are compatible with each other of the first curves and the second curve.

6. **(Original)** The method of Claim 1, and further comprising modifying additional surfaces having the $N \times M$ surface condition to edit the drawing.

7. **(Currently Amended)** A method for interfacing with a surface within a computer-aided drawing environment, comprising:

determining that a plurality of curves operable to define the surface constitute a $P \times 1$ surface condition, a $P \times 1$ surface condition being defined by a number of first curves equal to P and only one second curve, wherein P is an integer greater than zero;

~~if and only if it is determined that the~~ in response to determining that a plurality of curves constitute a $P \times 1$ surface condition, converting the $P \times 1$ surface condition into an $N \times M$ surface condition by generating at least one auxiliary curve that is substantially continuous with any adjoining surfaces of a surface having the $P \times 1$ surface condition and compatible with the number of first curves and the only one second curve that define the $P \times 1$ surface condition, an $N \times M$ surface condition being defined by a number of third curves equal to N and a number of fourth curves equal to M , wherein N and M are integers greater than one, wherein each of the third and fourth curves are of the same mathematical degree as the first and second curves to be compatible with the first and second curves;

constructing an $N \times M$ surface under the $N \times M$ surface condition; and
modifying the $N \times M$ surface to edit a drawing.

8. **(Original)** The method of Claim 7, wherein converting the $P \times 1$ surface condition into an $N \times M$ surface condition comprises generating an $N \times M$ surface condition to replace the $P \times 1$ surface condition.

9. **(Original)** The method of Claim 7, wherein converting the $P \times 1$ surface condition into an $N \times M$ surface condition comprises generating an $N \times M$ surface condition defined by the third and fourth curves such that the third and fourth curves are defined by mathematical equations all having an order no greater than mathematical equations defining the first and second curves.

10. **(Original)** The method of Claim 7, and further comprising processing the first curves and the second curve so that each one of the first curves and the second curve are compatible with each other of the first curves and the second curve.

11. **(Original)** The method of Claim 7, and further comprising modifying additional surfaces having the $N \times M$ surface condition to edit the drawing.

12. **(Currently Amended)** An apparatus for interfacing with a surface within a computer-aided drawing environment, comprising:

a software program stored on a computer readable medium and operable, when executed on a processor, to:

determine that a plurality of curves operable to define ~~the surface~~ a surface plane constitute a $P \times 1$ surface condition, a $P \times 1$ surface condition being defined by a number of first curves equal to P and only one second curve, wherein P is an integer greater than zero;

~~if and only if it is determined that the~~ in response to determining that a plurality of curves constitute a $P \times 1$ surface condition, convert the $P \times 1$ surface condition into an $N \times M$ surface condition, an $N \times M$ surface condition being defined by a number of third curves equal to N and a number of fourth curves equal to M , wherein N and M are integers greater than one, the third and fourth curves mathematically filling the space of the surface plane defined by the first curves and the only one second curve;

construct an $N \times M$ surface under the $N \times M$ surface condition; and

allow modification of the $N \times M$ surface to edit a drawing.

13. **(Original)** The apparatus of Claim 12, wherein the software program is operable to convert the $P \times 1$ surface condition into an $N \times M$ surface condition by generating at least one auxiliary curve that is substantially continuous with any adjoining surfaces of a surface having the $P \times 1$ surface condition and compatible with the number of first curves and the only one second curve that define the $P \times 1$ surface condition.

14. **(Original)** The apparatus of Claim 12, wherein the software program is operable to convert the $P \times 1$ surface condition into an $N \times M$ surface condition by generating an $N \times M$ surface condition to replace the $P \times 1$ surface condition.

15. **(Original)** The apparatus of Claim 12, wherein the software program is operable to convert the $P \times 1$ surface condition into an $N \times M$ surface condition by generating an $N \times M$ surface condition defined by the third and fourth curves such that the third and fourth curves are defined by mathematical equations all having an order no greater than mathematical equations defining the first and second curves.

16. **(Original)** The apparatus of Claim 12, wherein the software program is operable to process the first curves and the second curve so that each one of the first curves and the second curve are compatible with each other of the first curves and the second curve.

17. **(Original)** The apparatus of Claim 12, wherein the software program is operable to modify additional surfaces having the $N \times M$ surface condition to edit the drawing.

18. **(Currently Amended)** A system for interfacing with a surface within a computer-aided drawing environment, comprising:

a computer system having a display unit and an input device;

a computer readable medium coupled to the computer system, the computer readable medium comprising a software program operable to:

determine that a plurality of curves operable to define ~~the surface~~ a surface plane constitute a $P \times 1$ surface condition, a $P \times 1$ surface condition being defined by a number of first curves equal to P and only one second curve, wherein P is an integer greater than zero;

~~if and only if it is determined that the~~ in response to determining that a plurality of curves constitute a $P \times 1$ surface condition, convert the $P \times 1$ surface condition into an $N \times M$ surface condition, an $N \times M$ surface condition being defined by a number of third curves equal to N and a number of fourth curves equal to M , wherein N and M are integers greater than one, the third and fourth curves mathematically filling the space of the surface plane defined by the first curves and the only one second curve;

construct an $N \times M$ surface under the $N \times M$ surface condition; and

allow modification of the $N \times M$ surface to edit a drawing.

19. **(Original)** The system of Claim 18, wherein the software program is operable to convert the $P \times 1$ surface condition into an $N \times M$ surface condition by generating at least one auxiliary curve that is substantially continuous with any adjoining surfaces of a surface having the $P \times 1$ surface condition and compatible with the number of first curves and the only one second curve that define the $P \times 1$ surface condition.

20. **(Original)** The system of Claim 18, wherein the software program is operable to convert the $P \times 1$ surface condition into an $N \times M$ surface condition by generating an $N \times M$ surface condition to replace the $P \times 1$ surface condition.

21. **(Original)** The system of Claim 18, wherein the software program is operable to convert the $P \times 1$ surface condition into an $N \times M$ surface condition by generating an $N \times M$ surface condition defined by the third and fourth curves such that the third and fourth curves are defined by mathematical equations all having an order no greater than mathematical equations defining the first and second curves.

22. **(Original)** The system of Claim 18, wherein the software program is operable to process the first curves and the second curve so that each one of the first curves and the second curve are compatible with each other of the first curves and the second curve.

23. **(Original)** The system of Claim 18, wherein the software program is operable to modify additional surfaces having the $N \times M$ surface condition to edit the drawing.

24. **(New)** A method for interfacing with multiple surfaces within a computer-aided drawing environment, comprising:

determining that a first surface of a drawing comprises a first plurality of curves constituting a $P \times 1$ surface condition, a $P \times 1$ surface condition being defined by a number of first curves equal to P and only one second curve, wherein P is an integer greater than zero;

determining that a second surface of a drawing comprises a second plurality of curves constituting a first $N \times M$ surface condition, a first $N \times M$ surface condition being defined by a number of third curves equal to N and a number of fourth curves equal to M , wherein N and M are integers greater than one;

converting the $P \times 1$ surface condition of the first surface into a second $N \times M$ surface condition to match the $N \times M$ surface condition of the second surface, the second $N \times M$ surface condition being defined by a number of fifth curves equal to N and a number of sixth curves equal to M , wherein N and M are integers greater than one;

constructing an $N \times M$ surface under the second $N \times M$ surface condition; and

modifying the second $N \times M$ surface to edit a drawing.